CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-127
NPDES PERMIT NO. CA 0037702

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

EAST BAY MUNICIPAL UTILITY DISTRICT
SPECIAL DISTRICT NO.1
WATER POLLUTION CONTROL PLANT
OAKLAND, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. The East Bay Municipal Utility District, Special District No.1, hereinafter called the discharger, by application dated March 18, 1994 submitted a Report of Waste Discharge for reissuance of waste discharge requirements and a permit to discharge wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger owns and operates the East Bay Municipal Utility District, Special District No.1, wastewater treatment plant, located in Oakland, Alameda County. The facility has capacity to provide secondary level treatment for 120 million gallons per day (mgd) of domestic, commercial, and industrial wastewater from the cities of Albany, Alameda, Berkeley, Emeryville, Oakland, and Piedmont and the Stege Sanitary District. The average flow for 1993 at the treatment plant was 71.5 mgd.

3. The treatment facility consists of prechlorination and grit removal, primary clarification, high purity activated sludge, secondary clarification, disinfection by chlorination, and dechlorination by sulfonation. The treated wastewater is discharged into Central San Francisco Bay, a water of the State and United States, through a submerged diffuser adjacent to the San Francisco-Oakland Bay Bridge about 5,664 feet offshore at a depth of 45 feet below mean lower low water (Longitude 122 deg., 20 min., 55 sec.; Latitude 37 deg., 49 min., 2 sec.).

4. Sludge is thickened, anaerobically digested and dewatered before disposal in an authorized sanitary landfill and/or composting. The discharger currently composts approximately 20% of the sewage sludge.

5. The discharge is presently governed by Regional Board Order No. 89-149 adopted by Board on September 20, 1989, which allows discharge into Central San Francisco Bay.

6. The Board issued a separate NPDES permit (Order No. 92-97, NPDES Permit No. CA0038440) to the discharger which regulates the discharge from its interceptor wet weather facilities. The Board also issued a separate Order (Order No. 92-96) requiring the discharger to cease and desist discharging wet weather overflows from its interceptor system which is also in violation of the requirements prescribed in an NPDES permit.

7. The U.S. Environmental Protection Agency (USEPA) and the Board have classified this discharge as a major discharge.

8. The discharger has implemented and is maintaining an USEPA approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR 403) and this Board's Order No. 89-179.

9. The Board adopted a revised Water Quality Control Plan for the San Francisco Basin (Basin Plan) on December 17, 1986. The Board amended its Basin Plan on September 16, 1992, and the State Board approved it on April 27, 1993, with the approval from the State Office of administrative Law pending. Section 1 of the 1992 Basin Plan amendments, "Implementation of Statewide Plans," was remanded by the State Board on June 23, 1994, due to its reliance on two Statewide Plans that are no longer legally in effect. The Basin Plan identifies beneficial uses and water quality objectives for surface and groundwaters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses. This Order implements the plans, policies and provisions of the Board's Basin Plan.

10. Effluent limitations in this permit are based on the plans, policies, and water quality criteria of the Basin Plan, *Quality Criteria for Water* (EPA/5-86-001, 1986; Gold Book), applicable Federal Regulations (40 CFR Parts 122 and 131), and Best Professional Judgement.

11. The effluent limit for copper in this permit is based on 4.9 μg/l copper as an interpretation of the narrative toxicity objective in the Basin Plan, based on best professional judgement. Specifically, the use of 4.9 μg/l as the site-specific objective for copper is based on the Regional Board study that employed the "water effect ratio" approach developed by the EPA. This study and associated staff analysis are described in a September 25, 1992 staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay".

12. In 1993, the Regional Monitoring Program (RMP) found PCB concentrations in water throughout the estuary at levels exceeding the EPA criterion. The EPA criterion indicates the potential for bioaccumulation in fish tissue to levels that pose a risk to human health, when the fish is consumed. Concentrations of PCBs and other pollutants in fish tissue are being measured in a study currently being conducted by the Regional Board. The Regional Board and the discharger acknowledge that commercially available laboratory techniques do not allow for detection of PCBs or TCDD equivalents in effluent at levels low enough to determine the extent of contribution of these substances by the discharger. Therefore, rather than focusing additional resources on characterizing

PCBs' and TCDD equivalents' levels in effluent, the discharger is required to participate in a study to further define the level of contamination of fish tissue in the estuary, as described in Provision E.10. Since elevated PCB levels in the estuary is a region-wide issue, the Regional Board will be requiring all dischargers currently participating in the RMP to contribute to this study.

13. The discharger is currently investigating the use of alternative disinfection methods, including the use of ultraviolet radiation technology, to replace its current use of chlorine for effluent disinfection. The discharger's Alternative Disinfection Study will be evaluating the disinfection of fecal coliform in the effluent and the impacts of various disinfection levels on the receiving waters. Ultraviolet radiation is a viable alternative for disinfection. The ultraviolet radiation disinfection process will substantially reduce chemical uses at the treatment plant and eliminate the discharge of chlorinated by-products into San Francisco Bay. The Board encourages this effort to evaluate and develop safer and more environmentally acceptable disinfection practices and will take into consideration the discharger's evaluation and development efforts in reviewing compliance with Effluent Limitation B.3. of this Order.

14. The discharger has documented that the acute toxicity limitation, as specified in the Effluent Limitation B.5.1.(acute toxicity) of this Order, has not been exceeded during the previous three years, and on two separate occasions there was no difference in survival (100% survival) among rainbow trout, fathead minnow and Three-spine stickleback in concurrent flow-through screening tests.

15. The Beneficial uses identified in the Basin Plan for Central San Francisco Bay are as follows:

    - Industrial Service Supply
    - Industrial Process Supply
    - Navigation
    - Water Contact Recreation
    - Non-contact Water Recreation
    - Ocean Commercial and Sport Fishing
    - Wildlife Habitat
    - Preservation of Rare and Endangered Species
    - Fish Migration
    - Fish Spawning
    - Shellfish Harvesting
    - Estuarine Habitat

16. Federal Regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Available (BAT) and Best Conventional

Pollutant Control Technology (BCT) to control pollutants in industrial stormwater discharges.

The storm water flow from the wastewater treatment facility process areas are directed to the wastewater treatment plant headworks and treated along with the wastewater discharged to the treatment plant. These stormwater flows constitute all industrial storm water at these facilities and consequently this permit regulates all industrial storm water discharges at this facility.

17. An **Operations and Maintenance Manual** is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.

18. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21000) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

19. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.

20. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge of treated wastewater at a location or in a manner different than that described in Findings No. 3 and Findings No. 6 is prohibited.

2. The bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from collection system or pump stations tributary to the treatment plant is prohibited, except as allowed by Standard Provision A.12. (see attached "Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits")

3. The average dry weather flow shall not exceed 120 mgd. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

4. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

5. Discharges of water, materials, or wastes other than storm water, which are not otherwise authorized by this NPDES permit, to a storm drain system or waters of the State are prohibited.

6. Storm water discharges shall not cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS

The term "effluent" in the following limitations means the fully treated wastewater effluent from the discharger's wastewater treatment facility, as discharged to Central San Francisco Bay.

1. Effluent discharged to the outfall shall not exceed the following limits.

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Max
a. Biochem. Oxygen Demand (BOD5, 20°C)	mg/l	30	45	--	--
b. Total Suspended Solids	mg/l	30	45	--	--
c. Oil & Grease	mg/l	10	--	20	--
d. Settleable Matter	ml/l-hr	0.1	--	--	0.2
e. Total Chlorine Residual (1)	mg/l				0.0

Footnote:
(1) Requirement defined as below the limit of detection in standard test methods.

2. pH: the pH of the discharge shall not exceed 9.0 nor be less than 6.0

3. Total Coliform Bacteria:

The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality: The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 ml; and, any single sample shall not exceed 10,000 MPN/100 ml.

4. 85 Percent Removal, BOD and TSS:

The arithmetic mean of the biochemical oxygen demand (Five-day, 20°C) and total suspended solids values, by weight, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period.

5. Effluent Toxicity:

5.1 Acute Toxicity:

The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

11 sample median:	A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.
90th percentile:	A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

If the discharger demonstrates to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation. In the event that ammonia in the effluent consistently causes toxicity, the Board may consider modifying or granting an exception to this effluent limitation if the discharger demonstrates that ammonia in the effluent is not impacting receiving water quality or beneficial uses. Anti-backsliding will not apply to such a modification because the limit does not apply to ammonia toxicity.

5.2 Chronic Toxicity:

The discharge is classified as a deep water discharge. The chronic toxicity effluent limitation is based on a dilution ratio of 10:1.

The effluent from the treatment plant as discharged, shall meet both of the following chronic toxicity limitations:

a. an eleven sample median value[1] of 10 TUc[2]; and

b. a 90 percentile value[3] of 20 TUc[2].

[1] A test sample showing chronic toxicity greater than 10 TUc represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show chronic toxicity greater than 10 TUc.

[2] A TUc equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEL values. These terms and their usage in determining compliance with the limitations are defined in Attachment A of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified, compliance shall be based on the maximum TUc value for the discharge sample based on a comparison of TUc values obtained through concurrent testing of the two species.

[3] A test sample showing chronic toxicity greater than 20 TUc represents consistent toxicity and a violation of this limitation if one or more of the past ten or less samples shows toxicity greater than 20 TUc.

Board staff is in process of evaluating the second round of the Effluent Toxicity Characterization Program data. The Board may revise the chronic toxicity effluent limitation based on the results of this evaluation.

6. TOXIC SUBSTANCES EFFLUENT LIMITATIONS: The discharge of effluent containing constituents in excess of the following concentration limits is prohibited (a,f):

Table 1
(All limits in $\mu g/\ell$)

Constituent	Monthly Average(b)	Daily Average(b)	Interim Limits Monthly Average From 9/94 To 9/99
1. Arsenic (h)		200	
2. Cadmium (h)		30	
3. Chromium (VI) (c) (h)		110	
4. Copper		37	
5. Lead (g)		53	
6. Mercury	0.21	21	
7. Nickel (g)		65	

Table 1(continued)
(All limits in $\mu g/\ell$)

	Constituent	Monthly Average(b)	Daily Average(b)	Interim Limits Monthly & Daily Average From 9/94 To 8/98
8.	Selenium (g)	---	50	---
9.	Silver	---	23	---
10.	Zinc (g) (h)	---	580	---
11.	Aldrin	0.0014	---	0.01
12.	A-BHC	0.13	---	---
13.	B-BHC	0.46	---	---
14.	Chlordane (d)	0.0008	0.04	0.3
15.	Chloroform	4,800	---	---
16.	Cyanide (e)	---	10	---
17.	DDT (d)	0.006	0.01	0.01
18.	Dieldrin	0.0014	0.019	0.005
19.	Endosulfan (d)	---	0.087	---
20.	Endrin (d)	---	0.023	---
21.	G-BHC (Lindane)	0.62	1.6	---
22.	Halomethanes (d)	4,800	---	---
23.	Heptachlor	0.0017	0.036	0.015
24.	Heptachlor Epoxide	0.0007	---	0.025
25.	Hexachorobenzene	0.0069	---	0.009
26.	PAHs (d)	0.31	150	---
27.	Phenol	500	---	---
28.	PCBs (Total) (d)	0.0007	0.3	0.2
29.	TCDD Equivalents (d)	1.4E-07	---	1.5E-05
30.	Toxaphene (g)	---	0.002	0.36
31.	Tributyltin	0.05	---	---

Footnotes:

a. These limits are based on marine water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
b. Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).
c. The discharger may meet this limit as total chromium.
d. See California Enclosed Bays and Estuaries Plan, April 1991, Definition of terms; and Attachment C.
e. The discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.
f. All analyses shall be performed using current USEPA Methods, as specified in 40 CFR 136 (40 CFR 122.44(i)).

g. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four 24-hour composite samples shall be reported, as well as the average of four.
h. Limit was specified in the previous permit and is lower than new limit specified in the revised Basin Plan. The discharger has maintained compliance with this lower limit; therefore, this limit will continue to apply to the effluent, and not be replaced with the new limit from the Basin Plan.

C. RECEIVING WATER LIMITATIONS

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;
   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State anyone place within one foot of the water surface:

   a. Dissolved Oxygen — 5.0 mg/l, minimum

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

   b. Dissolved Sulfide — 0.1 mg/l, maximum

   c. pH — Variation from normal ambient pH by more than 0.5 pH units.

   d. Un-ionized Ammonia — 0.025 mg/l as N, annual median
      0.4 mg/l as N, max.

3. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Board or the State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

4. Storm Water Discharge

   a. Storm water discharges shall not adversely impact human health or the environment.

   b. Storm water discharges shall not cause or contribute to a violation of any applicable water quality objective for receiving waters contained in the Basin Plan.

D. SLUDGE MANAGEMENT PRACTICES

1. All sludge generated by the discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the discharger.

2. Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

3. Duty to mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4. The discharge of sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

5. The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6. The discharger shall submit an annual report to the USEPA and the Board containing monitoring results and pathogen and vector attraction reduction

requirements as specified by 40 CFR 503, postmarked February 19 of each year, for the period covering the previous calendar year.

7. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the discharger shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.

8. Permanent on-site sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the discharger.

9. General Provision C of this Board's "Standard Provisions and Reporting Requirements", dated August 1993, apply to sludge handling, disposal and reporting practices.

10. The Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

E. PROVISIONS

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 89-149. Order No. 89-149 is hereby rescinded.

2. Where concentration limitations in mg/l or μg/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

   (Mass Emission Limit in kg/day) = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 3.785 (conversion factor).

3. The discharger shall comply with all sections of this Order immediately upon adoption.

4. As new water quality objectives go into effect for San Francisco Bay (whether statewide, regional or site-specific), the effluent limitations in this permit will be modified as necessary to reflect the objectives. Adoption of the effluent limitations contained in this permit is not intended to restrict in any way future modification based on legally adopted water quality objectives.

5. Compliance with Chronic Toxicity Effluent Limitation

   a. If there is a violation of the chronic toxicity effluent limitation, the discharger shall conduct a chronic toxicity reduction evaluation (TRE), which shall initially involve a toxicity identification evaluation (TIE). The TIE shall be in

accordance with a work plan acceptable to the Executive Officer. The TIE shall be initiated within 30 days of the date of violation. The objective of the TIE shall be to identify the chemical or combination of chemicals that are causing the observed toxicity. Every effort using currently available TIE methodologies shall be employed by the discharger. As toxic constituents are identified or characterized, the discharger shall continue the TRE by determining the source(s) of the toxic constituent(s) and evaluating alternative strategies for reducing or eliminating the constituent(s) from the discharge. All reasonable steps shall be taken to reduce toxicity to the required level. The Board recognizes that identification of causes of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the discharger's actions in identifying and reducing sources of consistent toxicity.

b. The discharger shall comply with the screening phase monitoring requirements as specified in Attachment B of this Order.

6. Compliance With Toxic Substances Limitations

a. The dischargers shall comply with effluent limitations specified in Effluent Limitations B.6 immediately upon adoption of this Order.

b. The discharger shall initiate a monitoring program using appropriate USEPA methods and detection limits, to evaluate the compliance status for all constituents listed in Effluent Limitations in B.6. Monitoring for metals, cyanide, and PAHs shall be performed monthly during all periods of surface water discharge. For all other constituents listed in B.6, initial monitoring shall be performed for three consecutive wet months beginning with December, 1995, and three consecutive dry months beginning with June, 1995.

7. The dischargers shall submit, by January 30, 1998, a technical report acceptable to the Executive Officer summarizing the results of the monitoring done pursuant to Provision E.6. above. This report shall include the limit of quantification (LOQ), method detection limit (MDL), and practical quantification limit (PQL) achieved at the discharger's laboratory and an evaluation of compliance with the effluent limitations for each constituent. For each constituent, the LOQ, MDL and PQL should be less than the effluent limit, where reasonable and technically feasible. For constituents analyzed by an outside laboratories, MDLs and PQLs should be provided to the discharger by outside laboratories, and included in this technical report. If the monitoring results document that the effluent cannot meet the limits for toxic pollutants (Section B.6.), the discharger may petition for longer compliance periods or for reconsideration of the final effluent limitation. This petition must be based on the planning and implementation of an aggressive pollution prevention program. The Board shall consider the petition by the discharger no later than August 30, 1998.

8. Pollution Prevention Program

   a. The discharger shall continue to participate in the Pollution Prevention Program (previously known as the Waste Minimization Program) as described in the Basin Plan, Chapter IV, Waste Minimization Section.

   b. The discharger shall continue to implement and expand its existing Pollution Prevention Program in order to reduce the pollutant loadings to the treatment plant and, subsequently, to the receiving waters. The dischargers shall focus on constituents found to be in non-compliance with the Basin Plan Table IV-1B limits. For copper, the goal should be 20% reduction from a baseline annual mass loading of 4180 pounds per year.

   c. The discharger shall continue to submit annual reports by July 15th and progress reports by February 28th of each year that are acceptable to the Executive Officer. The reports should include (1) documentation of its efforts and progress, (2) evaluation of the program's accomplishments, and (3) identify specific tasks and establish time schedules for future efforts. Duplicate copies of the reports shall be provided: one to the NPDES Permit Case Handler and one to the Pollution Prevention Coordinator.

   d. The discharger shall complete implementation of the source reduction plan in order to reduce pollutant loading to the maximum extent practicable.

9. The discharger shall conduct a study to investigate the extent and degree of fish contamination in San Francisco estuary, in conjunction with other dischargers. The study should focus on PCBs, dioxin, and other bioaccumulative pollutants which have been measured in the estuary, either in water in concentrations exceeding EPA human health criteria, or in fish tissue in concentrations that pose a risk to human health. The study shall be designed based on results of the Regional Monitoring Program (RMP) and the fish contamination study conducted by the Regional Board in 1994, in order to address issues left unresolved by the 1994 fish contamination study. A study plan and schedule shall be submitted to the Executive Officer for approval by April 1, 1995, and shall reflect a comparable level of effort to the Regional Board's 1994 fish contamination study. The study shall be conducted in the 1995-1996 timeframe. The discharger may comply with this provision by funding the study through the RMP, however, such funding must be provided in addition to the level of funding already committed by the discharger to the RMP for 1995.

10. If the discharger chooses to pursue a capacity increase for the treatment plant, information that must be submitted prior to Board consideration of a flow increase must include, but may not be limited to, the following:

    a. Engineering reports documenting adequate reliability, capacity and performance of the completed improvements to the treatment facility;

b. Documentation that increased discharges (evaluation must include assessment of wet weather flows) will not result in degradation of receiving waters, or adverse impacts on beneficial uses of receiving waters, in accordance with State and Federal regulations;
c. Plans for including reuse of the treated effluent as an integral part of the wastewater management plan; and
d. Documentation of compliance with the CEQA.

11. The discharger shall implement and enforce its approved pretreatment program in accordance with Board Order 89-179 and its amendments thereafter. The discharger's responsibilities include, but are not limited to:

    a. Enforcement of National Pretreatment Standards (e.g. prohibited discharges, Categorical Standards, local limits) in accordance with 40 CFR 403.5 and Section 307(b) and (c) of the Clean Water Act.

    b. Implementation of the pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program.

    c. Submission of annual and quarterly reports to USEPA and the State as described in Board Order 89-179, and its amendments thereafter.

12. The discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The discharger shall submit to the Board, by April 15 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

13. Annually, the discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

14. The discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities in order to ensure that all capital facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the discharger's service responsibilities. A Capital

Facilities Management Program summary report discussing the status of this evaluation program, including any recommended or planned actions, shall be submitted to the Board by June 30 of each year.

15. The discharger shall comply with the **Self-Monitoring Program** for this order, as adopted by the Board and as may be amended by the Executive Officer.

16. The discharger shall comply with all applicable items of the attached "**Standard Provisions and Reporting Requirements** " dated August 1993, or any amendments thereafter.

17. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharge(s) governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

18. This Order expires on September 21, 1999. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.

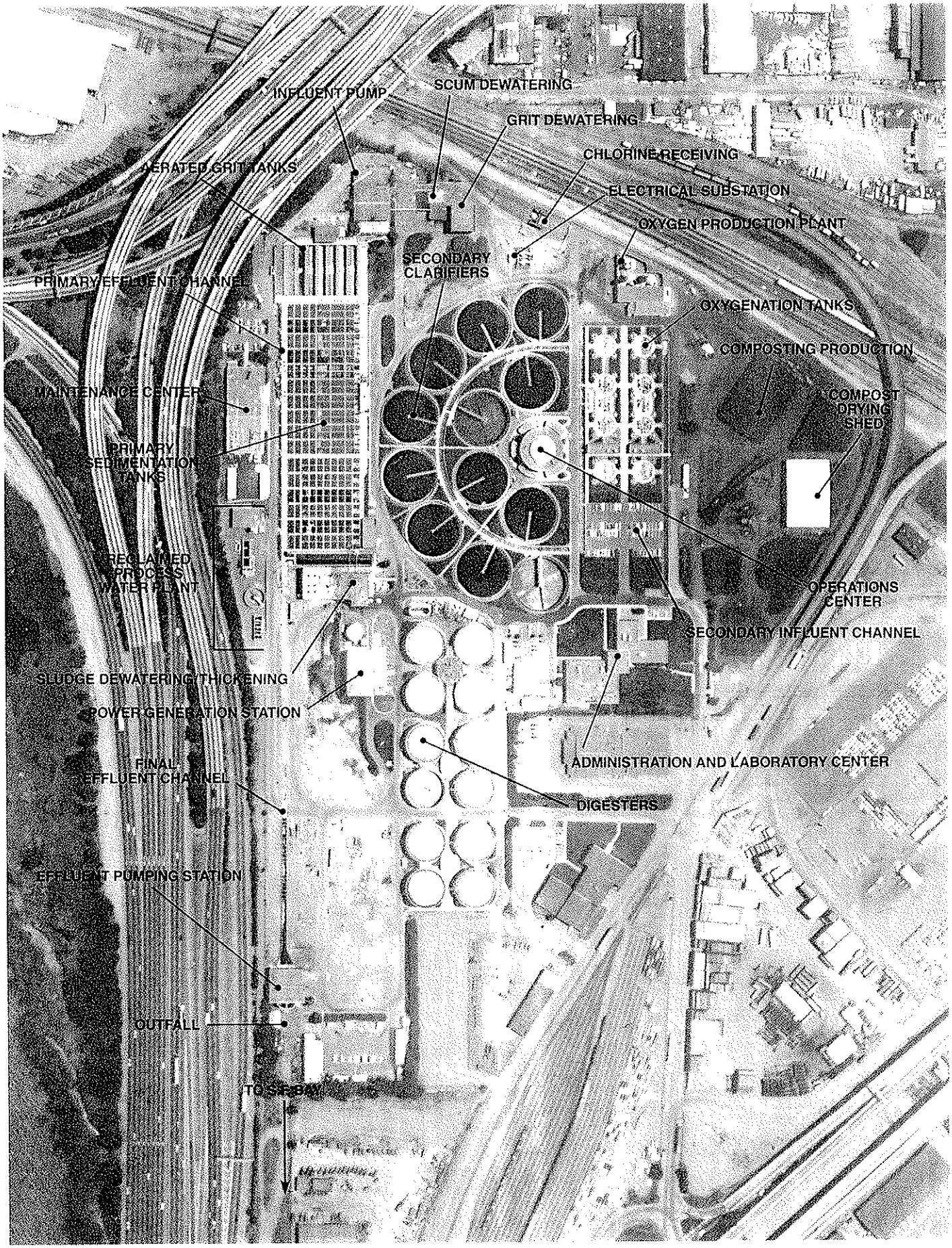
19. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 21, 1994.

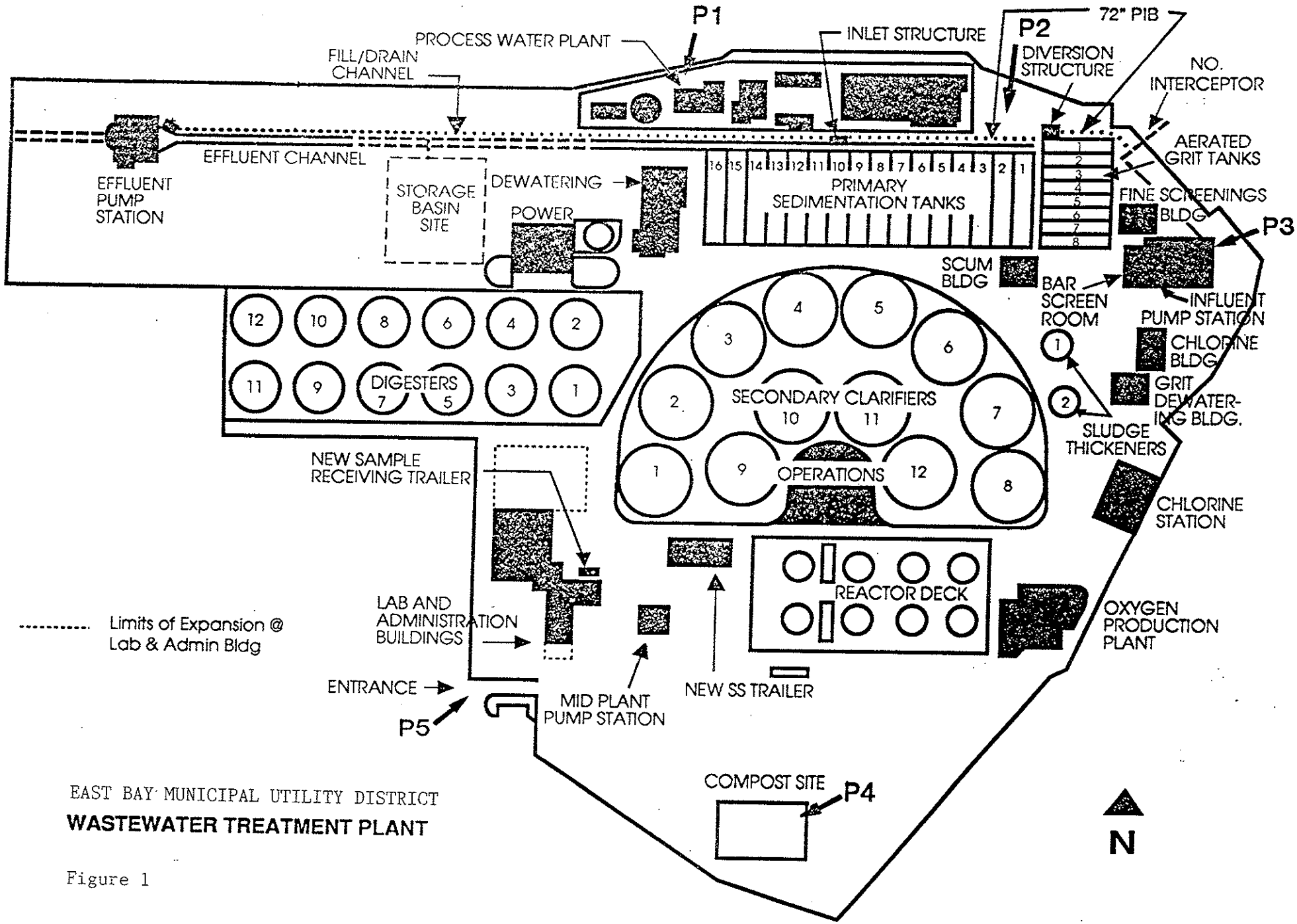
STEVEN R. RITCHIE
Executive Officer

Attachments:

Figure 1 - Facility Map
Attachment A - Definition of NOEL
Attachment B - Chronic Toxicity Screening Phase Monitoring Requirements
Attachment C - Definition of Terms for Chemical Constituents
Self-Monitoring Program
Standard Provisions and Reporting Requirements - August 1993
Resolution No. 74-10



2 | Aerial view of the East Bay Municipal Utility District's main wastewater treatment plant



EAST BAY MUNICIPAL UTILITY DISTRICT

WASTEWATER TREATMENT PLANT

Figure 1

ATTACHMENT A

DEFINITION OF NO OBSERVED EFFECT LEVEL

No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.

Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as EPA's Bootstrap Procedure.

No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

ATTACHMENT B

SCREENING PHASE MONITORING REQUIREMENTS

A. Screening phase compliance monitoring is required:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts; or

2. Prior to Permit reissuance. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

- Use of test species specified in Table B-1 and B-2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer;

- Two stages:

  Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table B-3 (attached); and

  Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

- Appropriate controls; and

- Concurrent reference toxicant tests.

C. The discharger shall submit a screening phase proposal to the Executive Officer for approval. The proposal shall address each of the elements listed above.

TABLE B-1
CRITICAL LIFE STAGE TOXICITY TESTS FOR ESTUARINE WATERS

SPECIES	EFFECT	TEST DURATION	REFERENCE
alga (Skeletonema costatum) (Thalassiosira pseudonana)	growth rate	4 days	1
red alga (Champia parvula)	number of cystocarps	7-9 days	5
giant kelp (Macrocystis pyrifera)	percent germination; germ tube length	48 hours	3
abalone (Haliotis rufescens)	abnormal shell development	48 hours	3
oyster (Crassostrea gigas) mussel (Mytilus edulis)	abnormal shell development; percent survival	48 hours	2
Echinoderms (urchins - Strongylocentrotus purpuratus, S. franciscanus); (sand dollar - Dendraster excentricus)	percent fertilization	1 hour	4
shrimp (Mysidopsis bahia)	percent survival; growth; fecundity	7 days	5
silversides (Menidia beryllina)	larval growth rate; percent survival	7 days	5

TOXICITY TEST REFERENCES

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.

2. American Society for Testing Materials (ASTM). 1989. Standard Practice for conducting static acute toxicity tests with larvae of four species of bivalve molluscs. Procedure E 724-89. ASTM, Philadelphia, PA.

3. Anderson, B.B. J.W. Hunt, S.L. Turpen, A.R. Coulon, M. Martin, D.L. McKeown, and F.H. Palmer. 1990. Procedures manual for conducting toxicity tests developed by the marine bioassay project. California State Water Resources Control Board, Sacramento.

4. Dinnel, P.J., J. Link, and Q. Stober. 1987. Improved methodology for sea urchin sperm cell bioassay for marine waters. Archives of Environmental Contamination and Toxicology 16:23-32. and S.L. Anderson. September 1, 1989. Technical Memorandum. San Francisco Bay Regional Water Quality Control Board, Oakland, CA.

5. Weber, C.I., W.B. Horning, II, D.J. Klem, T.W. Neiheisel, P.A. Lewis, E.L. Robinson, J. Menkedick, and F. Kessler (eds.). 1988. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms. EPA-600/4-87/028. National Technical Information Service, Springfield, VA.

TABLE B-2
CRITICAL LIFE STAGE TOXICITY TESTS FOR FRESH WATERS

SPECIES	EFFECT	TEST DURATION	REFERENCE
fathead minnow (Pimephales promelas)	survival; growth rate	7 days	6
water flea (Ceriodaphnia dubia)	survival; number of young	7 days	6
alga (Selenastrum capricornutum)	cell division rate	4 days	6

TOXICITY TEST REFERENCE

6. Horning, W.B. and C.I. Weber (eds.). 1989. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms. Second edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-89/001.

TABLE B-3
TOXICITY TEST REQUIREMENTS FOR STAGE ONE SCREENING PHASE

REQUIREMENTS	RECEIVING WATER CHARACTERISTICS		
	DISCHARGES TO COAST	DISCHARGES TO SAN FRANCISCO BAY‡	
	Ocean	Marine	Freshwater
Taxonomic Diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type			
Freshwater†	0	1 or 2	3
Marine	4	3 or 4	0
Total number of tests	4	5	3

† The fresh water species may be substituted with marine species if:

1) the salinity of the effluent is above 5 parts per thousand (ppt) greater than 75% of the time, or

2) the ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

‡ Marine refers to receiving water salinities greater than 5 ppt at least 75% of the time during a normal water year. Fresh refers to receiving water with salinities less than 5 ppt at least 75% of the time during a normal water year.

ATTACHMENT C

DEFINITION OF TERMS FOR CHEMICAL CONSTITUENTS

CHLORDANE shall mean the sum of chlordane-α, chlordane-γ, chlordene-α, chlordene-γ, nonachlor-α, nonachlor-γ, and oxychlordane.

CHROMIUM VI limit may be met by analysis for total or hexavalent chromium.

DDT shall mean the sum of the p,p' and o,p' isomers of DDT, DDD (TDE), and DDE.

ENDOSULFAN shall mean the sum of endosulfan-α, endosulfan-β, and endosulfan sulfate.

ENDRIN shall mean the sum of endrin and endrin aldehyde.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity equivalence factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDD	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDFs	0.001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

EAST BAY MUNICIPAL UTILITY DISTRICT
SPECIAL DISTRICT NO. 1
WATER POLLUTION CONTROL PLANT
OAKLAND, ALAMEDA COUNTY

NPDES NO. CAOO37702
ORDER NO. 94-127

CONSISTING OF
PART A, DATED AUGUST 1993
AND PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment or sidestream.

B. EFFLUENT

Station	Description
E-1	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.
E-1-D	At any point in the disinfection facilities at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS (SAN FRANCISCO BAY)

Station	Description
C-11	At a point in San Francisco Bay directly over the diffuser structure of the outfall line and 500 feet easterly of Diffuser Station 18. Diffuser Station 18 is also over the diffuser structure and is located at 37 deg., 49 min., 02 sec. W and 122 deg., 20 min., 55 sec. E. See attached Location Map.
C-4, C-9	At points in San Francisco Bay, located in the vicinity of the terminal of the outfall, as shown in the attached Location Map.
C-16	At a point in San Francisco Bay, located at the intersection of two range lines, described as follows: (1) A line passing through the SIREN on the northerly of two wharf systems on the easterly side of Treasure Island and the flashing white light situated at the northernmost point of Treasure Island, and

	(2) A line passing through the BELL on the southerly of two wharf systems on the easterly side of Treasure Island and the stack on shore, and approximately on line with the pier extending into the wharf system on which the BELL is situated.
C-17	At a point in San Francisco Bay, located at the intersection of two range lines, described as follows: (1) A line passing through Buoy "1" and Buoy "3" markers for the northerly side of Oakland Outer Harbor Entrance Channel, and (2) A line passing through Buoy "2", marker for the southerly side of Oakland Outer Harbor Entrance Channel, and Buoy "3" marker for the northerly side of Oakland Middle Harbor Entrance Channel.

D. LAND OBSERVATIONS

Station	Description
P-1 through P-n	Located at equidistance intervals, not to exceed 300 feet on the fenceline in the closest proximity to the main pumping station and the primary sedimentation tanks. (A sketch showing the location of these stations, and the assigned designations and appurtenances will accompany each report)

E. OVERFLOWS AND BYPASSES

Station	Description
O-1 through O-n	Bypass or overflows from treatment facility, manholes, pump stations, interceptors under the discharger's control.

NOTE:

1. A map and description of each known or observed overflow or bypass location shall accompany each monthly report. A summary of these occurrences and their locations shall be included with the Annual Report for each calendar year.

II. CHRONIC TOXICITY MONITORING REQUIREMENT

A. Test Species and Frequency: The discharger shall collect a 24-hour composite sample of the treatment plant effluent at the station E-1 or E-2, for critical life

stage toxicity testing in accordance with the attached Table 1. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

B. Methodology: Sample collection, handling and preservation shall be in accordance with EPA protocols. The test methodology used shall be in accordance with the references cited in Order No. 92-104, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

C. Dilution Series: The discharger shall conduct tests at 50%, 40%, 25%, and 15%. The "%" represents percent effluent as discharged.

III. CHRONIC TOXICITY REPORTING REQUIREMENTS

A. Routine Reporting: Toxicity test results for the current reporting period shall include at a minimum, for each test

1. sample date(s)
2. test initiation date
3. test species
4. end point values for each dilution (e.g. number of young, growth rate, percent survival)
5. NOEC value(s) in percent effluent
6. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25} ... etc.) in percent effluent
7. TUc values (100/NOEC, $100/IC_{25}$, and $100/EC_{25}$)
8. Mean percent mortality ($\pm$s.d.) after 96 hours in 100% effluent (if applicable)
9. NOEC and LOEC values for reference toxicant test(s)
10. IC_{50} or EC_{50} value(s) for reference toxicant test(s)
11. Available water quality measurements for each test (e.g. pH, D.O, temperature, conductivity, hardness, salinity, ammonia)

B. Compliance Summary: Each self-monitoring report shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under Section A item numbers 1, 3, 5, 6(IC_{25} or EC_{25}), 7, and 8.

C. Reporting Raw Data in Electronic Format: On a quarterly basis, by February 15, May 15, August 15, and December 15 of each year, the discharger shall report all chronic toxicity data for the previous calendar quarter in the format specified by the Statewide Chronic Toxicity Database Management System.

IV. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observation shall be that given in Table 1.

VI. REPORTING REQUIREMENTS

1. General Reporting Requirements are described in Section C of this Board's "Standard Provisions and Reporting Requirements", dated August 1993.

2. Self-Monitoring Reports for each calendar month shall be submitted monthly, by the 22nd day of the following month. The required contents of these reports are described in Section F.4. of Part A.

3. An Annual Report for each calendar year shall be submitted to the Board by February 15th of the following year. The required contents of the annual report are described in Section G.5. of Part A.

4. Any overflow, bypass or significant non-compliance incident that may endanger health or the environment shall be reported according to the Sections F.1 and F.2 of Part A.

I, Steven R. Ritchie, Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 94-127.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be authorized by the Executive Officer.

3. Is effective on the date shown below.

STEVEN R. RITCHIE
Executive Officer

Effective Date: 9/21/99

Attachment:
A. Location Map
B. Table 1

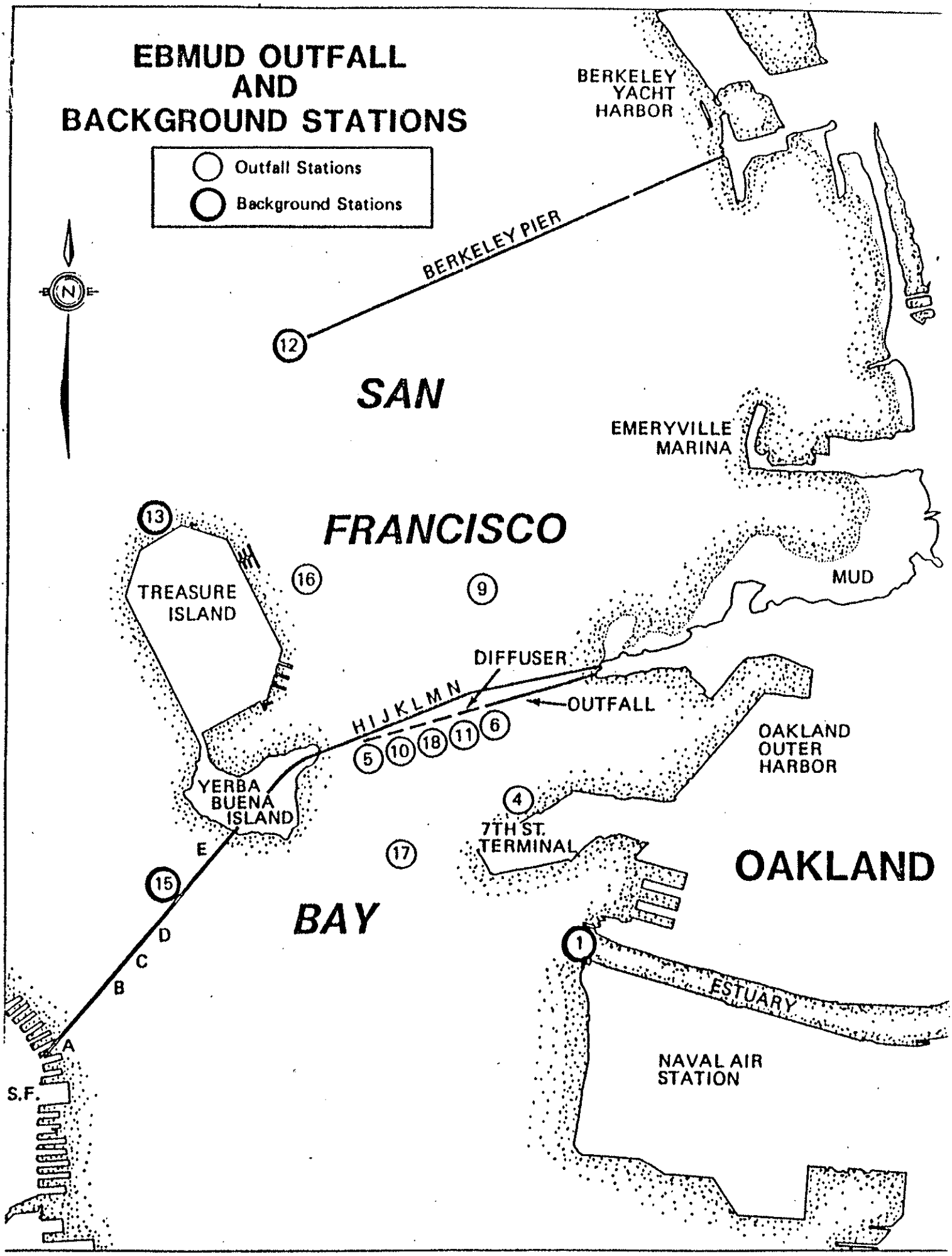

EBMUD OUTFALL
AND
BACKGROUND STATIONS
Outfall Stations
Background Stations
N
BERKELEY
YACHT
HARBOR
BERKELEY PIER
12
SAN
FRANCISCO
BAY
EMERYVILLE
MARINA
MUD
13
TREASURE
ISLAND
16
9
DIFFUSER
OUTFALL
H I J K L M N
5
10
18
11
6
OAKLAND
OUTER
HARBOR
YERBA
BUENA
ISLAND
4
7TH ST.
TERMINAL
17
OAKLAND
E
15
D
C
B
A
S.F.
1
ESTUARY
NAVAL AIR
STATION

TABLE 1 (1,8,11)
SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS
EAST BAY MUNICIPAL UTILITY DISTRICT, SPECIAL DISTRICT NO.1

SAMPLING STATION	A-1	E-1			E-1-D			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C-24	G(4)	C-24	Cont.	G(4)	C-24	Cont	G	O	
Flow Rate (mgd)	D			D						
BOD, 5-day, 20° C (mg/l & Kg/day) (1,3)	D		D							
Total Suspended Solids (mg/l & Kg/day) (1,3)			D							
Chlorine Residual & Dosage (mg/l & Kg/day) (10)					H or Cont.					
Settleable Matter (ml/l-hr. & Cu. ft./day)		D								
Coliform (Total or Fecal) (MPN/100 ml)					D			2/M		
Acute Fish Toxicity, 96-hr. (% survival) (5,6,7)				2/M						
Chronic Toxicity (6)			M							
Oil & Grease (mg/l & Kg/day) (2)		W								
Ammonia Nitrogen (mg/l & Kg/day)			2/W[9]							
Nitrate Nitrogen (mg/l & Kg/day)										
Nitrite Nitrogen (mg/l & Kg/day)			2/W[9]							
pH (Units)		D						2/M		
Dissolved Oxygen (mg/l & % Saturation)		D						2/M		
Temperature (°C)		D						2/M		
Apparent Color (color units)			W					2/M		
Secchi Disc (inches)								2/M		

TABLE 1 (Continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS
EAST BAY MUNICIPAL UTILITY DISTRICT, SPECIAL DISTRICT NO. 1

SAMPLING STATION	A-1	E-1			E-1-D			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C-24	G(4)	C-24	Cont.	G(4)	C-24	Cont	G	O	
Sulfides (If DO < 5.0 mg/l) Total & Dissolved (mg/l)		D						2/M		
Arsenic (μg/l & Kg/day)	Q		W							
Cadmium (μg/l & Kg/day)	Q		W							
Chromium (μg/l & Kg/day)	Q		W							
Copper (μg/l & Kg/day)	Q		W							
Cyanide (μg/l & Kg/day)	Q		W							
Lead (μg/l & Kg/day)	Q		W							
Mercury (μg/l & Kg/day)	Q		W							
Nickel (μg/l & Kg/day)	Q		W							
Selenium (μg/l & Kg/day)	Q		W							
Silver (μg/l & Kg/day)	Q		W							
Zinc (μg/l & Kg/day)	Q		W							
PAHs (μg/l & Kg/day)	Q		W							
All applicable Standard Observations								2/M	W	E
Organic Priority Pollutants (μg/l & Kg/day) (12)			Y							
Un-ionized Ammonia (mg/l)								2/M		

LEGEND

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample (24-hour)
Cont. = continuous sampling
O = observation

TYPES OF STATIONS

E = waste effluent stations
C = receiving water stations
L = basin and/or pond levee stations
P = treatment facilities perimeter stations

FREQUENCY OF SAMPLING

E = each occurrence
H= once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = twice per year
Q = quarterly, once each in Mar., June, Sept., & Dec.

2H = every 2 hours
2D = every two days
2W = every two weeks
2M = every two months
Cont. = continuous

NOTES FOR TABLE 1:

(1) During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analysis:

a. Composite sample for BOD and Total Suspended Solids.
b. Grab samples for Total Coliform, Settleable Matter, and Oil and Grease.
c. Continuous monitoring of flow.
d. Continuous or every two hour monitoring of chlorine residual.

(2) Oil and Grease sampling shall consist of a grab sample. In the event that sampling for oil and grease every two week or less frequency shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

(3) Percent removal (effluent vs. influent) shall also be reported.

(4) Grab samples shall be taken on day(s) of composite sampling.

(5) Compliance with the acute toxicity limitations shall be determined using tests with Fathead Minnow and Three-spine Stickleback. All tests shall be conducted in accordance with EPA protocols.

(6) Sample date for bioassay and one for all other specified parameters shall coincide with composite sample(s).

(7) If a continuous bioassay is to be run, sample may be from E-1 prior to disinfection instead of dechlorinating E-1 effluent.

(8) If any effluent sample is in violation of limits, except those for metals, cyanide, and organics, sampling shall be increased for that parameter to at least daily or grater until compliance is demonstrated in two successive samples. Receiving water violations shall be reported in the monthly report; increased receiving water monitoring may be required. Compliance measurements represent compliance status for the time period between measurements.

(9) These parameters shall be tested for on the same composite sample used for the bioassay.

(10) Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

(11) All flow other than to the outflow (e.g. sludge, etc.) shall also be reported monthly. Daily records shall be kept of the quantity (cu. yds. or cu. ft.) and solids content (%) of dewatered sludge disposed of and the location of disposal.

(12) Organic priority pollutants and other constituents of the September 16, 1992 Basin Plan amendments must be monitored on a monthly basis for three months pursuant to Provision E.7. of this permit (i.e. three months wet season and three month dry season) to determine whether any of these constituents are present in excess of their corresponding effluent limits. The frequency of sampling will revert to once per year, as indicated in Table 1, for constituents that are determined to be non-detectable, with the exception of TCDD equivalents, for which the frequency of sampling will revert to once per permit reissuance. If the three months of monitoring show that concentrations of a specific pollutant are near or above its effluent limit, the Board may require sampling frequencies grater than once per year.